

Application No.: 09/823,441  
Response

R E M A R K S

Reconsideration of the application in view of the following remarks is respectfully requested. No claims have been amended, canceled or added. Therefore, claims 10 and 12 are pending in the application.

IDS Mailed June 5, 2003

Applicants appreciate the Examiner returning a copy of the signed Form PTO-1449 from the Information Disclosure Statement (IDS) mailed to the USPTO on June 5, 2003. *However, the Examiner did not initial items AA and AB on the Form PTO-1449.* Applicants request that the Examiner consider these items, initial them, and then return another copy of the signed Form PTO-1449 with the next paper for this application.

Additional Supplemental IDS Mailed August 26, 2003

Applicants mailed an additional Supplemental IDS to the USPTO on August 26, 2003, which was before the mailing date of the present office action. Applicants request that the Examiner consider the references listed therein and return a copy of the signed Form PTO-1449 with the next paper for this application.

Claim Rejections under 35 U.S.C. § 103(a)

The Examiner rejected claims 10 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Brogan et al., "Group Behavior for Systems with Significant Dynamics". Applicants respectfully traverse these rejections.

In rejecting Applicants' independent claims 10 and 12, the Examiner contends that Brogan et al. discloses the ability to limit assigned location replacement in a target layout to a small subgroup (less than N of the members) that is selected

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based on an evaluation function. More specifically, in the last office action (mailed April 18, 2003) the Examiner asserted that Brogan et al.'s number of visible neighbors  $n$  corresponded to the selected K members recited in Applicants' claims 10 and 12. The Examiner has apparently withdrawn this assertion.

The Examiner now asserts that Brogan et al.'s members with non-zero predicted error (apparently as defined by equation (11) on page 143) corresponds to the selected K members recited in Applicants' claims 10 and 12. Specifically, the Examiner states that "only the members with non-zero predicted error have their locations in the target layout replaced". (Office Action mailed September 12, 2003, page 2, last 3 lines). *Applicants submit that this statement does not appear to be correct.* Namely, it appears that none of the locations of Brogan et al.'s robots, even those with non-zero predicted error, are ever replaced. Instead, Brogan et al. uses the predicted error in position to adjust the velocity of the robot so that the position of the robot will match the desired position. This is evident in the following statement by Brogan et al.:

"The control system uses the error in desired position to compute a velocity,  $x_d$ , that will make the position of the robot at the end of the next flight phase match the desired position".  
(Brogan et al., page 143, col. 2, paragraph 2).

Therefore, instead of "replacing the assignments of the locations in the target layout" as is recited in Applicants' claims, Brogan et al. adjusts the velocity of the robot so that the position of the robot will match the desired position. As such, none of the desired positions of Brogan et al.'s robots are replaced, which means that Brogan et al. does not disclose element (e) of Applicants' claims 10 and 12. The

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Examiner would be more correct to state that only the robots with non-zero predicted error have their velocities changed, which is evident from Brogan et al.'s equation (13) on page 143. Regardless of whether or not the velocity of one of Brogan et al.'s robots is changed, the desired position of the robot is still not replaced.

In fact, Applicants submit that Brogan et al. teaches directly against Applicants' claimed invention. This is because Brogan et al. strives to make the position of the robot match the desired position, whereas Applicants' claims actually replace the assigned locations in the target layout. Any attempted modification of Brogan et al.'s system to make it replace the desired position of a robot would render Brogan et al.'s system unsatisfactory for its intended purpose of trying to make the position of the robot match the desired position. This means that a person of ordinary skill in the art would not be motivated to modify Brogan et al.'s system in this manner. As such, Brogan et al. simply cannot be used to establish a *prima facie* case of obviousness of Applicants' independent claims 10 and 12 and the rejections must be withdrawn.

No Fees Believed to be Due

No fees are believed to be due for this response.

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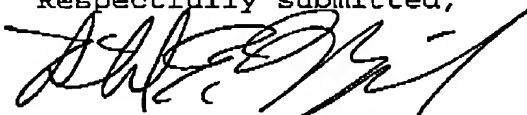
C O N C L U S I O N

In view of the above, Applicant submits that the pending claims are in condition for allowance. Should there remain any outstanding issues that require adverse action, it is respectfully requested that the Examiner telephone Richard E. Wawrzyniak at (858) 552-1311 so that such issues may be resolved as expeditiously as possible.

Respectfully submitted,

Dated

12/10/03



Richard E. Wawrzyniak  
Reg. No. 36,048

Address all correspondence to:

Richard E. Wawrzyniak, Esq.  
FITCH, EVEN, TABIN & FLANNERY  
120 So. LaSalle Street, Suite 1600  
Chicago, Illinois 60603  
Customer No. 22242  
Telephone No.: (858) 552-1311  
Facsimile No.: (858) 552-0095